

42D Series T1235-008 Plug-in Switch Mode Power Supply Unit

INPUT

| | MINIMUM | NORMAL | MAXIMUM |
|------------------------------------|--|---------------|---------|
| AC Input Voltage | 90V AC | 100 – 240V AC | 264V AC |
| AC Input Frequency | 47 Hz | 50 / 60 Hz | 63 Hz |
| AC Input Current – 115V AC (max) | | | 0.8A |
| AC Input Current – 230V AC (max) | | | 0.4A |
| AC Inrush Current* – 115V AC, 60Hz | No damage shall occur and the input fuse shall not blow. | | |
| AC Inrush Current* – 230V AC, 50Hz | | | |
| Primary current protection | An internal fuse on the AC input line is provided. | | |
| Configuration | 3-conductors, <Active, Neutral, Earth> | | |

* At full-load, 25°C, cold start.

Power consumption at no load (maximum)

| | |
|---------------------|-----------|
| Input 110V AC 60 Hz | 0.50W max |
| Input 230V AC 50 Hz | 0.75W max |

OUTPUT

| | |
|-------------------------------|--|
| Normal DC Output Voltage | +12.0V |
| Minimum Load Current | 0.0A |
| Maximum Load Current | 3.5A |
| Maximum Output Power | 42W |
| Ripple and Noise * | 120mV |
| Efficiency (min) ** | 80% |
| Over-voltage protection (max) | 15.75V DC |
| Over-current protection *** | 8A |
| Total Output Regulation | +/- 5% |
| Dynamic Load Regulation **** | +/- 5% |
| Short-circuit protection | No damage when shorting the DC output to ground. |
| Open-circuit protection | When primary power is applied with no load on any output level, no damage or hazardous conditions should occur. |
| Drop-out | With half cycle input voltage drop-out, the unit shall meet the regulation requirement and operate within the prescribed voltages with a drop-out pulse repetition rate of 500mS under full load and with normal AC input voltage. |

* Voltage measured P-P at 20MHz and output parallel with 0.1uF & 47uF capacitor to ground. Temperature at 25°C and normal AC input voltage.

** At normal input voltage and full load.

*** Maximum with auto recovery function.

**** For 50% ~ 100% ~ 50% load change at any frequency up to 250Hz with 50% duty.

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MECHANICAL

| | |
|-----------------|--|
| Dimensions | 102.5(L) x 57.5(W) x 34.5(H)mm maximum. |
| Weight | 280g maximum. |
| Input Plug Type | IEC-C8 2-pin 2-conductors, <Active, Neutral> |
| Output Cord | Wire: SPT-1, VW-1, 18AWG, 1828mm. |
| Output Plug | 11(L) x 5.5(D) x 2.1(ID)mm |

ENVIRONMENTAL

| | |
|-----------------------|------------------------------|
| Cooling | Natural convection. |
| Operating Temperature | 0°C to +40°C |
| Storage Temperature | -20°C to +60°C |
| Operating Humidity | 20 ~ 85 % RH. Non-condensing |
| Storage Humidity | 5 ~ 95 % RH. Non-condensing |

SAFETY

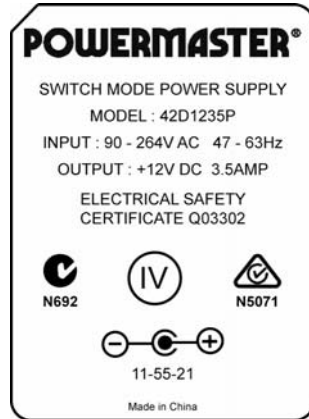
| | |
|---|--|
| Dielectric withstanding voltage test (Hi-pot test) input to output | 1,800V AC, 10mA, 1 second OR 2,545V DC, 10mA, 1 second. |
| Dielectric withstanding voltage test (Hi-pot test) input to safety ground | 1,500V AC, 10mA, 1 minute OR 1,800V AC, 10mA, 1 second. |
| Ground continuity test. Primary inlet F.G to secondary ground | 25A for 3 seconds, 100mΩ maximum. |
| Insulation Resistance | > 100MΩ at 500V DC between Primary Active, Neutral line and secondary. |
| Leakage Current | 0.5mA maximum at normal AC input voltage and frequency |

RELIABILITY

| | |
|----------------------------------|--|
| Mean Time Between failure (MTBF) | The power supply is designed to have a MTBF of 50,000 operating hours at 90% confidence-level. |
| Burn-in Test | 4 hours at 40°C +/- 5°C, normal input voltage, 80% of maximum load. |

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RATING PLATE (Typical only)



PRODUCT OUTLINE DRAWING

